

Memorandum

Bob Reid

Date : March 12, 1981

Subject: Application for
Class II Primacy

From : Department of Conservation—
Division of Oil and Gas

Place: Long Beach

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A. Case of Possible Degradation

Richfield Oilfield

DIVISION OF OIL & GAS
SACRAMENTO

Texaco, Inc. injector YW-9 was acidized on 11/7/80 and on 11/8/80 Union Oil Co. "Yorba Linda Group" 4 (abandoned in 1975) began flowing about 600 b/d water from around the casing. The injector (and others) was shut in and the flow decreased and later stopped.

Subsequent investigations suggested a top perforation leak in the injector at 2786', with communication between the two wells through an aquifer at about 2675'. A shale interval at 2680'+ was later squeezed to solve the problem. The base of fresh water is about 1000'.

A poorly placed BFW plug in the Union well resulted in migration of the injection water up the casing annulus from about 2675' to the surface.

B. Nonhydrocarbon Injection Zones

1. Gaspur Aquifer -- Wilmington FB II, III, IV, V.
See attached plates from LACFCD Dominguez Gap Barrier Project, March 1962.
2. Puente Formation -- Sawtelle Oil Field
The Injection interval is 988' of sands in the Puente Formation of late Miocene age. Depth to the uppermost sand is 3120'. Available reservoir volume was calculated at 691 acre-ft. This is a highly faulted area and limits are unknown.
3. Alpha I & II Aquifers -- Huntington Beach Oil Field
These aquifers average 100' (gross) in thickness and are in the upper portion of the Lakewood Formation of late Pleistocene age. These zones in the area of injection are confined to the NE by the Newport-Inglewood fault and Santa Ana River channel fill. These zones also appear to outcrop underneath the ocean to the SW. Depths to the Alpha I aquifer near the fault are 70-100'.

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4. "Recent" sands -- Seal Beach Oil Field
These sands cover a rather extensive area along the coast and inland to the Central Basin. Seaward, the sands are either thinly covered or outcrop in the sea floor. Depths average about 40 to 60 feet and thicknesses range from 10 to 40 feet.
5. "Repetto" sands -- Seal Beach Oil Field
Disposal is into 620' of "Repetto" sands of early Pliocene age. Depth to the uppermost sand is 3860'. The only known lateral limit is the Seal Beach fault to the NE.
6. BP, R, S, T, F₀, F sands -- Belmont Offshore Oil Field
These sands are part of the Repetto formation of lower Pliocene age. The top of the R sand is between 2670' and 2850' deep. The thickness of the injection interval varies between 340' to 640'.

Sincerely,



Richard W. Strehle
Enhanced Recovery Engineer

RWS:eb

Attachments

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